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ABSTRACT

A pilot project, conducted by California State Polytechnic University, Pomona, for the California State University and Colleges, investigated the value of the System of Interactive Guidance and Information (SIGI) as a career planning tool, and assessed its impact on the university's instructional timesharing computer from November 1977 to December 1978. Results indicated that: (1) undeclared majors, women, younger, and lower division students were overrepresented as SIGI users; (2) at least 94% of the student users gave SIGI a grade of A or B in terms of its interesing aspects; (3) students tended to more ably identify their values, occupational choices, and issues ragarding their career plans; (4) SIGI increased the productiveness of counselors' time; (5) faculty responses to SIGI were favorable; and (6) computer time allotted for SIGI was used efficiently. (Author/HLM)

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The Report of the Pilot Project to Evaluate The System of Interactive Guidance and Information

Conducted November 7, 1977 to December 8, 1978

by

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTRODUCTION

This is the report of the pilot project conducted for the California State University and Colleges (CSUC) by California State Polytechnic University, Pomona (Cal Poly, Pomona) to examine the question of the value of the System of Interactive Guidance and Information (SIGI) as a career planning tool and to assess its impact on the university's instructional timesharing computer. The pilot project covered a period from November 1977 to December 1978.

The highlights of the study are:

- Undeclared majors, women, younger, and lower division students were overrepresented as SIGI users.
- Significant change occurred for students on the five Pre and Post responses that cover current thinking about career plans, knowledge of values, ability to make career decisions, ability to make decisions in general, and quantity of information about career options.
- Of student users, 94% gave SIGI a grade of A or B on the question "How interesting was SIGI to you?"
- Cost per student user for 4 hours of program time is $5.87 (using 7 year amortization of equipment). Cost per available terminal hour is $.78.
- With the acquisition of 32K of computer memory and 4 ports there was no degradation of response time on the University PDP 11/45 computer.

BACKGROUND

The System of Interactive Guidance and Information (SIGI). SIGI was developed by the Educational Testing Service (ETS) under the direction of Martin R. Katz. The program is based on Dr. Katz's 20 years of research on work-related values in career decision making.

SIGI consists of six interrelated subsystems: Values, Locate, Compare, Prediction, Planning, and Strategy. At the heart of the system are the students' own values--the rewards and satisfactions they would like to realize through their occupations.

After establishing a desired list of values to be fulfilled by an occupation, a list of occupations is produced in the Locate subsystem that should fulfill the values specified. (A list of the occupations in the SIGI data base is found in Appendix A.) The student is permitted and encouraged to change the values to see the effect on the list. When this type exploration is voluntarily ended by the student, the Compare section is begun. Occupations are compared, three at a time, on up to 28 questions from the definition of the work, to occupational outlook, to the number of women in the field. (See Appendix B)

Prediction is an option available for local development to permit the student to predict success in the various academic programs based on success in previous course work. (This subsystem is not presently under development at Cal Poly Pomona.)

Part of the Planning subsystem provides information on the routes to enter each occupation with specific emphasis on local academic programs. (This subsystem is under development, but not operating at Cal Poly Pomona.)

The final section is Strategy. Here the students learn a decision making model. The students evaluate rewards and risks of occupations in terms of their own values.

The emphasis of the total program is not one of telling the students "what they should be" but rather making them examine and become aware of their work related values, to see some occupations that should meet the values they specified (and how they may need to compromise their originally specified values if they are to be happy in certain occupations), to get more information on a wide variety of occupations; and to learn a decision making strategy.

As Chapman et al (1977, P 7-8) state,

> In short we don't want to play the decision-making game for the student. We want to help him master the strategies for rational behavior in the face of uncertainty so that he can play the game effectively himself... therefore, values are at the heart of the SIGI system. They provide the dimensions along which students analyze their own desires and along which they construe occupational characteristics. They are the theme that runs through the separate sections of SIGI, tying them together into a comprehensive whole.

History. Original development of the program was conducted under two grants from the Carnegie Corporation. The field testing of the program was funded by the National Science Foundation. Five community colleges, including Pasadena City College, and one four year institution (Illinois State University) were included in this 1975 study.

The ETS evaluation and independent research conducted by the pilot campuses supported

> satisfaction with SIGI by students and counselors; evidence of effectiveness, however defined, in meeting stated objectives; side effects in enhancing counselors' contributions to students' career decision-making. The evidence appears not only in questionnaires and tests; it comes also from such unobtrusive measures as long waiting lists to use SIGI, the high proportion of users who have been referred by their friends and who spread the word to other friends, the development of courses and various activities at career planning centers to focus on SIGI and integrate it into the total career guidance program, the enthusiastic reception of visitors, and eagerness to see SIGI used as widely as possible (Chapman et al, 1977, p 704).

The University of California, Irvine (UCI), funded under a three year grant from the W.K. Kellogg Foundation, installed SIGI in 1976, to become the first four year institution to acquire the program independent of ETS' pilot program. The UCI Year II report to the W.K. Kellogg Foundation concludes, "The evaluation data continues to be overwhelmingly positive... and the subjective comments offered by students,... overwhelmingly positive" (UC Irvine 1978, p 19).

As part of the W.K. Kellogg Foundation grant a California Consortium for SIGI was developed as the foundation for the search for grant monies to support expansion of SIGI throughout the state to 3 campuses of the University of California, 3 of the California State University and Colleges, and 3 private institutions. Cal Poly Pomona is a member.

Pilot Evaluation at California State Polytechnic University, Pomona. In February, 1977, the California State Polytechnic University, Pomona, submitted a feasibility study to purchase the necessary hardware and to lease the software to install SIGI in the Career Planning and Placement Center. Following extensive discussion and negotiation with the State Department of Finance and the Division of Information Systems (DIS) of the CSUC Chancellor's Office, a pilot evaluation of SIGI was approved. In June, 1977, purchase of terminals, printers, memory and installation of necessary cable was begun.

On November 7, 1977 the SIGI program became operational. After a period of familiarization and staff training, student appointments were accepted. During this pilot project, data were collected as agreed in the pilot proposal. At the end of Fall Quarter 1978 the pilot phase of the program ended. This is the report of that pilot project.

METHOD

The scope of the study is based primarily on the evaluation plan contained in the June 6, 1977 memorandum from D. Dale Hanner, Vice Chancellor, Business Affairs, California State University and Colleges Chancellor's Office and Donald Metzger, State Data Processing Officer in the California State Department of Finance (Appendix C) and primarily covers: (1) Demographic information and the reported impact of SIGI, (2) program utilization, (3) cost of implementation and projected costs per student user, (4) the impact of SIGI on the computer timesharing system.

1. Demographic information and the reported impact of SIGI. SIGI users were essentially self selected with the exception that students enrolled in two courses, Career and Personal Exploration (CPU 100) and Introduction to Physical Education (PE 201) were required to complete the program as part of their coursework.

Questionnaires were developed for all SIGI users both before and after using SIGI (Appendices D and E). The items on these questionnaires were adapted from the instruments used in the ETS pilot project and the UC Irvine evaluation. Demographic data and referral source information were collected before use of SIGI. Pre and Post SIGI responses were collected on the students current thinking about career plans, knowledge of values, ability to make career decisions specifically and ability to make decisions in general, and the

quantity of information about career options. The Statistical Package for the Social Sciences was used for statistical analysis (Nie et al 1975). T tests were computed to identify statistical significance between mean differences for subgroups as well as all SIGI users.

The Post SIGI instrument also collected "Grades" for SIGI on several dimensions including its helpfulness.

2. Program utilization. Weekly reports were compiled which examined utilization of terminal time, appointment time, no show rates and number of users. Monthly summary data were also prepared.

3. Cost of implementation and projected cost per student user. All direct costs have been collected and examined on a basis of cost and available hour cost. Figures are based on a 7-year amortization of the hardware purchased and an annual lease cost.

4. Degradation of computer timesharing facilities due to the operation of the SIGI Program. Following extensive consultations between the University, the CSUC Division of Information Systems and the Educational Testing Service, the University purchased for the PDP 11/45 computer, 32K of word core memory, one port chassis (4 ports), and one line adapter to support the operation of the SIGI program.

During Christmas break of 1977, the University Computer Center ran a benchmark program with the PDP 11/45 computer in the following configurations -

A) With the basic 64K of memory.
B) With 96K of memory - The additional 32K was added for instructional timesharing.
C) With 128K of memory - The additional 32K for the support of the SIGI program.
   1. Without SIGI operational.
   2. With SIGI fully operating.

During the Winter Quarter 1978, the Computer Center obtained and ran an analysis package, STATS, from the Digital Equipment Corporation (DEC). This program monitors and evaluates response time of the computer to various programs.

FINDINGS

1. Student users of SIGI and reported impact.

   A. Demographic information.

   Students who use SIGI differ from the Cal Poly Pomona population in that they tend to be younger, lower division students, women and undeclared majors. The data in Table 1 summarize the demographic information on student SIGI users.

   B. Referral source and other assistance received.

   Table 2 outlines other assistance students have received regarding their career choices. Parents and relatives were mentioned by 59.9% of all students.

TABLE 1

Demographic Information
Student SIGI Users

		SIGI Users	Cal Poly 1978
School of Major:	Agriculture	13.3%	15.7%
	Arts	23.8	20.2
	Business	18.0	23.7
	Engineering	10.7	21.7
	Environmental Design	3.7	5.7
	Science	11.7	9.7
	Undeclared	18.8	3.3
Age:	18 and under	26.7%	11.2%
	19 - 21	41.2	33.6
	22 - 24	16.2	25.2
	25 - 30	10.3	18.2
	Over 30	5.6	11.8
Sex:	Male	49.0%	63.0%
	Female	51.0	37.0
Ethnic Group:	Black	4.5%	2.5%
	Chicano	4.9	5.3
	Latin	2.9	1.7
	Native American	4.3	1.1
	Anglo/White	74.7	49.1
	Asian American	3.9	5.2
	Other	4.8	3.5
	No Response		29.6
	Declined to State		2.0
Year in School:	Freshman	37.6%	22.6%
	Sophomore	21.7	17.2
	Junior	17.0	20.8
	Senior	17.9	28.6
	Second Bachelors	2.4	2.0
	Masters	2.7	8.8
	Guest	.7	
Enrolled in Career and Personal Exploration Class:			
	No	78.2%	99.9%
	Yes	21.8	0.1
Residence:	On Campus	18.4%	8.2%
	At home with parents	46.7 >	91.8
	Other off campus	34.7	

How students found out about SIGI is summarized in Table 3. Friends (word of mouth) was the most common response (26.6%). Publicity about SIGI was carefully controlled because with more student awareness and appointments came longer waiting periods for usage and a greater no-show rate.

C. Pre and Post SIGI responses

The Pre and Post responses of SIGI users on the scales for current thinking about career plans, knowledge of values, ability to make career decisions and ability to make decisions in general, and the quantity of information about career options were all statistically significant (see Table 4).

Statistical significance was generally maintained for each of the subgroups (see Table 5). A number of subgroups with small numbers did not show significant change on the "ability to make decisions in general" scale. This lack of statistical significance is not seen as negative since the aim of the program is to assist career decision making and the change on the "ability to make a career decision" scale was significant.

D. Student satisfaction with SIGI

As can be seen in Table 6, there was overwhelming support for the SIGI program with over 94% of the students giving SIGI an A or B on "How interesting was SIGI to you?"

The highest combined A and B grades (95.9%) went to "Showing you the relationship between values and career decisions."

"Helping you learn how to make career decisions" received the weakest A and B score (82.7%), albeit still highly respectable.

SIGI received 94.4% A and B grades on the question of "Overall, how good is SIGI."

2. Program Utilization

Table 7 reviews monthly utilization of the four terminals dedicated to SIGI. Average weekly scheduled time per quarter shows that 82.4% of available time was scheduled in Winter Quarter, 68.8% in Spring Quarter, 39.0% in Summer Quarter, and 82.6% during Fall Quarter. Overall 67.4% of available terminal time was scheduled.

Computer downtime, which was predominately pre-scheduled, accounted for only 5.5% of available time.

The Student Record Management System which establishes, maintains, corrects, and deletes student and demonstration accounts worked very effectively. The clerical staff has maintained the system without difficulty.

TABLE 2

OTHER ASSISTANCE RECEIVED REGARDING CAREERS

Source	% Reporting Assistance
High School Counselor or Teacher	41.8
Parents, Relatives	59.9
Career Planning and Placement Center	16.9
University Counseling Center	13.2
Residence Hall Staff	2.4
Vocational Testing	21.5
Other	20.2

Note: Students were permitted to report more than one source

TABLE 3

SIGI USERS REFERRAL SOURCES

Source	% Reporting Source
Posters	17.3
Poly Post (Student Newspaper)	11.4
Counseling Center	9.9
Faculty	18.1
Career and Personal Exploration Class	17.8
Career Planning and Placement Center	9.2
Friend	26.6
Resident Advisor	3.7
Other	9.5

Note: Students were permitted to report more than one source

TABLE 4

PRE AND POST SIGI REPORTS FOR ALL SIGI USERS

QUESTION	MEAN ON 7 POINT SCALE			SIGNIFICANCE
	Pre	Post	Difference	
Which statement best describes your current thinking about your occupational or career plans?	3.8977	5.0120	1.1142	***
What statement best describes your current thinking about your values as they relate to a career or occupation?	4.3271	5.5991	1.2726	***
What statement best describes how you feel about your ability to make decisions, in general?	4.8581	5.3683	0.5102	***
What statement best describes how you feel about your ability to make a career decision?	4.1364	5.0996	0.9632	***
How much information do you presently have about possible career options?	3.4570	5.0150	1.5580	***

* $p < .05$
** $p < .01$
*** $p < .001$

Note: See Apendices A and B for sample questionnaires

TABLE 5

STATISTICAL SIGNIFICANCE OF DIFFERENCE BETWEEN PRE AND POST SIGI RESPONSES OF SPECIAL GROUPS

QUESTIONS	Current Thinking About Career Plans	Knowledge About Values	Ability To Make Career Decisions In General	Ability To Make Career Decisions	Quantity Of Information About Career Options
SCHOOL					
Agriculture	***	***	***	***	***
Arts	***	***	***	***	***
Business	***	***	***	***	***
Engineering	***	***	***	***	***
Env Design	*	***	NS	**	***
Science	***	***	***	***	***
Undeclared	***	***	***	***	***
ACADEMIC YEAR					
Freshman	***	***	***	***	***
Sophomore	***	***	***	***	***
Junior	***	***	***	***	***
Senior	***	***	***	***	***
Second Bachelor	***	***	***	***	***
Masters	***	***	***	***	***
SEX					
Male	***	***	***	***	***
Female	***	***	***	***	***
ETHNICITY					
Black	**	**	NS	**	***
Chicano	**	***	*	***	***
Latino	**	**	NS	*	***
Native Am	***	***	NS	*	***
Anglo/White	***	***	***	***	***
Asian Am	***	***	**	**	***
Other	**	***	**	***	***
AGE					
Under 18	***	***	***	***	***
19-21	***	***	***	***	***
22-24	***	***	***	***	***
25-30	***	***	***	***	***
Over 30	[illegible]	***	NS	***	***
CAREER CLASS					
Yes	***	***	***	***	***
No	***	***	***	***	***

NS = Not Significant
* $p < .05$
** $p < .01$
*** $p < .001$

TABLE 6

PERCENTAGES OF LETTER GRADES GIVEN TO SIGI BY ALL USERS

Grade SIGI received on each of the following:	A	B	C	D	F
How interesting was SIGI to you?	62.7	31.6	4.5	1.1	0.1
How clear was SIGI in giving information?	68.8	27.0	4.0	0.1	0.1
Overall, how good is SIGI?	57.0	37.4	4.8	0.8	0.0

Grade SIGI received on how useful each of the following was:	A	B	C	D	F
Helping you decide which occupation to prepare for	19.2	52.7	24.1	2.7	1.3
Helping you become more aware of your values	64.6	28.6	5.5	1.2	0.1
Showing you the relationship between values and career decisions	65.3	30.6	3.3	0.7	0.1
Helping you find out which occupations might fit your values	58.1	33.1	7.2	1.2	0.4
Helping you get information about occupations	46.9	36.5	14.6	1.6	0.4
Helping you learn how to make career decisions	34.4	48.3	15.8	1.1	0.4

TABLE 7

UTILIZATION OF AVAILABLE HOURS BY MONTH

	'77 NOV	'77 DEC	'78 JAN	'78 FEB	'78 MAR	'78 APR	'78 MAY	'78 JUNE	'78 JULY	'78 AUG	'78 SEPT	'78 OCT	'78 NOV	'78 DEC*
SCHEDULED HOURS	341	510	798	700	585	719	547	306	219	371	395	816	701	72
CANCELLATIONS	47	147	147	130	133	175	115	54	56	65	71	147	196	15
WALK-INS	33	116	92	54	47	67	32	8	5	8	17	69	94	6
NO SHOWS	62	93	135	110	60	153	108	31	22	30	57	196	104	10
TOTAL HOURS USED	265	386	608	514	439	458	356	229	146	284	284	542	495	53
DOWNTIME	15	134	26	64	88	36	28	48	4	8	74	16	28	8
UNUSED HOURS	77	149	258	226	381	354	536	515	570	536	402	378	325	155
TOTAL HOURS AVAILABLE	357	669	892	804	908	848	920	792	720	828	760	936	848	216
STUDENT USERS (Ind.)	144	160	311	246	166	214	145	70	46	67	105	285	237	19

*Includes first 6 working days of December only

Total Hours Used = Scheduled Hours - Cancellations + Walk-ins - No Shows

Total Hours Available = Total Hours Used + Downtime + Unused Hours

Student Users (Ind.) is the number of student appointments. Students normally make two two hour appointments to complete SIGI.

3. Cost of Implementation and Projected per Student User Cost

Costs for necessary hardware are itemized in Table 8. Total hardware costs were $34,593. First year software costs were $1800. Second year software costs included $420 establishing on a calendar year cycle for payment and $2000 for an annual software lease. Total costs for 7 years of operation are outlined in Table 9.

Maintenance contracts for terminals and printers were not purchased and maintenance will be paid on a per call basis. During the first year no maintenance visits were necessary.

The cost of maintenance on the memory and port chassis was assumed under the computer maintenance contract.

Supplies for the program (printer paper and ribbons) cost less than $120 for the pilot year.

In order to develop a projected student user cost a 7 year base for costs and amortization of equipment, constant levels of cost for software, maintenance, and related supplies was assumed. Also assumed was a constant level of student use (the pilot year as a base) and projected maintenance visits on a per call basis.

With annual student use of 1310 students per year the cost would be:

Per student user	$5.87
Per student per hour of use	$1.47
Per terminal/hour	$ .78

4. Impact of Computer Timesharing due to the Operations of the SIGI Program

The methods section of this report (page 3) reviews the procedure used to assess degradation of response time on the University PDP 11/45. Using the various procedures and programs described, it was determined that there has been no degradation of response time on the PDP 11/45 caused by SIGI and that the upgrade of computing equipment to support the program was adequate for that purpose.

DISCUSSION

All studies conducted to date have been overwhelmingly positive as to the value of SIGI. Some studies have had a control group and others have not. This study has not had the benefit of this protection against the Hawthorne effect. Nonetheless the extent of the positive results should not be underestimated since the data is very comparable to the other studies.

The A and B letter grades given to the program by Cal Poly, Pomona students were higher than the pooled responses reported by Chapman et al (1977, p. 617) for the ETS Field Test.

Eighty-six percent of the Field Test students graded SIGI with an A or B on how interesting SIGI was; at Cal Poly, Pomona SIGI received 94.3 percent A or B grades.

TABLE 8

Cost of Hardware to Support
The SIGI Program
(In Summer, 1977)

4 Terminals w/interface	$ 7,800
4 Printers w/interface	7,260
1 32K Word Core Memory	8,280
1 Port Chassis	5,311
1 Line Adapter	290
Tax and freight, and installation	2,171
Cable and cable installation	3,481
TOTAL HARDWARE COST	$34,593

TABLE 9

Estimated Total SIGI Program Costs for 7 Years

Hardware	$ 34,593
Software	14,220
Supplies	840
Maintenance @ $84/visit	4,200
TOTAL	$ 53,853

ETS found 90% of the students gave A's or B's to SIGI on how clear SIGI was; in this study 95% of the students awarded SIGI an A or B.

Likewise on helpfulness in making students aware of their values, Cal Poly, Pomona SIGI users graded the system higher grades than did the participants in the ETS Field Test (93.2% A's and B's vs. 85%).

Helpfulness in finding occupations that fit their values produced 91.2% A's and B's from Cal Poly, Pomona students and only 79% from the Field Test students.

ETS noted the Field Test data "pattern of responses at all colleges was strikingly similar with regard to most questions" (Chapman, 1977, p. 616). This study followed that positive pattern.

ETS found counselors "do not perceive SIGI as taking over the burden of career counseling. Rather it improves the quality of counseling sessions" (Chapman, 1977, p. 703). The subjective finding at Cal Poly, Pomona was very similar. The staff responses have been very positive. Counselors report that students who have used SIGI have learned important concepts and vocabulary. This has been reflected in greater readiness and motivation to pursue career questions. Basically, SIGI use has made counselor time more productive.

Faculty responses have also been positive. The faculty has been identified by students as the second highest referral source.

Numerous faculty members have incorporated SIGI into their course work from the subject of English themes, to a portion of a business personnel course, and Physical Education survey course. This faculty involvement with SIGI is a good beginning for the development of the Planning Subsystem.

UC Irvine reported similar increased SIGI generated faculty involvement. The UC Irvine involvement seems however to have been less spontaneous and more related to the comprehensive program developed to generate such involvement.

The spontaneity of the Cal Poly, Pomona faculty and the willingness of individual faculty members to incorporate the program into their classes may well be generated by the high level of career focus prevalent on this campus.

The high career orientation of the campus may not only explain the high level of acceptance of SIGI by the faculty but it may easily be the reason for high acceptance by the students. This would be a very appropriate area for further investigation.

The potential is great for further research on the use of SIGI. One such study is now underway at Cal Poly, Pomona. A survey of SIGI users one year after their use of the program will examine their current evaluation of SIGI on similar dimensions to the study reported here.

CONCLUSION

Only support has been found for ETS' findings of:

> satisfaction with SIGI by students and counselors; evidence of effectiveness, however defined, in meeting stated objectives; side effects in enhancing counselors' contributions to students' career decision making. The evidence appears not only in questionnaires and tests; it comes also from such unobtrusive measures as long waiting lists to use SIGI, the high proportion of users who have been referred by their friends and who spread the word to other friends, the development of courses and various activities at career planning centers to focus on SIGI and integrate it into the total career guidance program, the enthusiastic reception of visitors, and eagerness to see SIGI used as widely as possible (Chapman, et al 1977 p. 704).

Further the conclusions of Pyle and Stripling (1976, p. 74) are echoed:

> In response to public demand for increased accountability coupled with the reality of tighter budgets, student personnel administrators are faced with an increasing need to justify expenditures. This study provides evidence of the potential value of the SIGI computer program. This evidence should be of assistance in developing a rationale for spending the money on such a program and for time allotted to train counselors in the effective use of the SIGI program.

On the basis of other research and the data presented here, it is concluded that SIGI is a very beneficial program and should be made available to the campuses of the California State University and Colleges.

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SIGI QUESTIONS FROM COMPARE

DEFINITION AND DESCRIPTION
(1) Definition of occupation?
(2) Description of work activities?
(3) Level of skill in interacting with data, people, things?
(4) Where to get more information?

EDUCATION, TRAINING, OTHER REQUIREMENTS
*(5) Early Entry: Education required?
(6) Specific occupational training?
(7) Examples of college courses?
(8) Personal qualifications?
(9) Other requirements?

INCOME (National figures)
(10) Beginning salary?
(11) Average income? (Shows the mid-point of salaries nationwide)
(12) Top salary possibilities?
(13) How salaries vary?

PERSONAL SATISFACTIONS
(14) Help others: Chances to help?
(15) Leadership: Chances to lead?
(16) Interest Field: Which field?
(17) Prestige level?
(18) Special problems?

CONDITIONS OF WORK
(19) Physical surroundings?
(20) Leisure: hours, vacation?
(21) Independence on the job?
(22) Variety?
(23) Fringe benefits?

OPPORTUNITIES AND OUTLOOK
(24) National employment outlook?
(25) Where are the jobs (U.S.)?
(26) Security in the occupation?
(27) Advancement?
(28) How many women?

If you do not want to ask any more questions right now, press NEXT.
If you want to select another question, press its number and then NEXT.
If you make a mistake, press RUBOUT and start over.

FIGURE 14

Questions that students can ask in COMPARE. Students select three occupations for which they are seeking information. Then they may "program" the computer to answer up to five questions before returning to this list or selecting a new set of occupations. In this display, the student has already chosen the question marked with the asterisk and is about to choose another.

State of California

Trustees of The California State University and Colleges

Memorandum

To : Mr. Donald Metzker
State Data Processing Officer
State Data Processing Management Office
Department of Finance
1025 P Street, Room 527
Sacramento, California 95814

Date: June 6, 1977

From : D. Dale Hanner, Vice Chancellor
Business Affairs

JUN 10 1977

VICE PRESIDENT

Subject: Upgrade of PDP 11/45 at Pomona for Career Guidance System

Reference: Log No. 367-77

This memo confirms telephone conversations with House, Galea, Clark and myself. We accept your willingness to grant approval of the referenced subject upgrade. This upgrade will provide for a pilot evaluation of the Career Guidance System (SIGI). The details of this evaluation plan will be forwarded to you within approximately two months. This plan will include at least the following items:

1. The impact, in terms of degradation, on instructional timesharing.

2. The value of SIGI as a career guidance system in terms of:

   a. The number of students utilizing SIGI on a month-by-month basis.

   b. The frequency of use and/or total number of hours of use by individual students.

   c. Demographic data on students utilizing SIGI as compared to their representation in the total student population, e.g., undeclared majors, age groups, ethnic status, types of majors, sex, and prior use of counseling or career planning and placement services.

   d. Student evaluations to determine:

      1) Reasons for using SIGI
      2) Degree of satisfaction with SIGI
      3) Evaluation in terms of making choices of academic majors, careers, or changes of program.

3. Should SIGI prove valuable as defined in 2) the examination of alternatives to the use of the campus instructional PDP 11/45 will be made in terms of cost effectiveness.

This pilot is expected to require no more than one year.

DDH:LHB:mh

cc: Mr. William Behnk
Mr. Dale Claypool
Mr. Richard Cutting
Mr. Robert Hoover
Dr. James Bell
Dr. Laurence H. Baker

Career Planning and Placement Center
California State Polytechnic University, Pomona

PRE-EVALUATION FORM

SYSTEM OF INTERACTIVE GUIDANCE AND INFORMATION
(SIGI)

Cal Poly, Pomona is serving as a pilot for the California State System in the use of SIGI. We are being asked by the system-wide Chancellor's Office to do an evaluation of students' responses to see if the SIGI System has been a helpful tool in career planning. Consequently, we would appreciate you filling out this form and also a post-evaluation form as honestly and accurately as possible. Thank you for your assistance.

1. Name_____ 2. Local Phone_____

3. Local Address_____ City_____ Zip_____

4. Pin Number_____ 5. Date_____

(18 & under: 26.7; 19-21: 41.2; 22-24: 16.2; 25-30: 10.3; over 30: 5.6)

6. Age_____ Sex_____ Male (49.0) Female (51.0)

7. Ethnic Group:

(A) ___ Black (4.5) (C) ___ Latino (2.9) (E) ___ Anglo/White (74.7)

(B) ___ Chicano (4.9) (D) ___ Native American (4.3) (F) ___ Asian American (3.9)

(G) ___ Other (4.8)

8. School program in which I am enrolled: Agr (13.3) Arts (23.8) Bus (18.0) Engr (10.7) Env Des (3.7) Sci (11.7) Undeclared (18.8)
School_____ Major_____

Please fill in undeclared if you have not chosen a major.

9. Year in school:

(A) _____ Freshman (37.6) (D) _____ Senior (17.9) Guest (0.7)

(B) _____ Sophomore (21.7) (E) _____ Second Bachelor (2.4)

(C) _____ Junior (17.0) (F) _____ Masters (2.7)

10. Presently enrolled in Career and Personal Exploration Class (CPU 100)?

(A) (21.8) Yes (B) (78.2) No

11. Residence:

(A) (18.4) On-Campus (C) (46.7) At Home With Parents

(B) (34.7) Other Off-Campus

12. Which statement best describes your current thinking about your occupational or career plans?

1 (8.2) 2 (11.8) 3 (17.1) 4 (28.2) 5 (17.9) 6 (12.5) 7 (4.2)

No Specific Careers in Mind — 3 or More Different Careers in Mind — Know Exactly the Career I Want to Enter

13. What statement best describes your current thinking about your values as they relate to a career or occupation?

1 (4.1) 2 (4.1) 3 (9.8) 4 (40.8) 5 (23.2) 6 (13.7) 7 (4.2)

No Clear Idea of My Values — General Idea of Values — Know Exactly My Values

(Note: Figures in parentheses are the percent of responses.)

14. What statement best describes how you feel about your ability to make decisions, in general?

1 (2.2) 2 (2.6) 3 (8.3) 4 (25.6) 5 (27.9) 6 (22.6) 7 (10.9)

Not Confident — Somewhat Confident — Very Confident

15. What statement best describes how you feel about your ability to make a career decision?

1 (5.0) 2 (7.4) 3 (17.6) 4 (30.2) 5 (22.6) 6 (12.7) 7 (4.5)

Not Confident — Somewhat Confident — Very Confident

16. How much information do you presently have about possible career options?

1 (9.4) 2 (15.4) 3 (17.7) 4 (39.9) 5 (13.2) 6 (3.8) 7 (0.5)

None of the Information I Need — Some of the Information I Need — All the Information I Need

17. What other kinds of assistance have you received regarding your career? (Check as many as appropriate.)

(A) (41.8) High school counselor or teacher.

(B) (59.9) Parents, relatives.

(C) (16.9) Career Planning and Placement Center.

(D) (13.2) University Counseling Center.

(E) (2.4) Residence Hall Staff.

(F) (21.5) Vocational Testing.

(G) (20.2) Other, please explain _____

_____

18. Who or what referred you to SIGI?

(A) (17.3) Posters

(B) (11.4) Poly Post

(C) (9.9) Counseling Center

(D) (18.1) Faculty

(E) (17.8) Career and Personal Exploration Class

(F) (9.2) Career Planning and Placement Center

(G) (26.6) Friend

(H) (3.7) Resident Advisor

(I) (9.5) Other

19. What attracted you to SIGI?

_____

_____

_____

_____

APPENDIX E

Career Planning and Placement Center
California State Polytechnic University, Pomona

POST-EVALUATION FORM

SYSTEM OF INTERACTIVE GUIDANCE AND INFORMATION
(SIGI)

1. Name_____ 2. Pin Number_____

3. Date_____

4. Which statement best describes your current thinking about your occupational or career plans?

1 (0.8)	2 (2.1)	3 (6.4)	4 (24.8)	5 (25.9)	6 (32.0)	7 (8.0)
No Specific Careers in Mind		3 or More Different Careers in Mind				Know Exactly the Career I Want to Enter

5. What statement best describes your current thinking about your values as they relate to a career or occupation?

1 (0.0)	2 (0.5)	3 (1.6)	4 (13.0)	5 (23.2)	6 (45.4)	7 (16.2)
No Clear Idea of My Values			General Idea of Values			Know Exactly My Values

6. What statement best describes how you feel about your ability to make decisions, in general?

1 (0.0)	2 (1.1)	3 (3.5)	4 (17.1)	5 (28.4)	6 (36.3)	7 (13.7)
Not Confident			Somewhat Confident			Very Confident

7. What statement best describes how you feel about your ability to make a career decision?

1 (0.1)	2 (1.5)	3 (7.3)	4 (21.2)	5 (28.8)	6 (32.1)	7 (9.0)
Not Confident			Somewhat Confident			Very Confident

8. How much information do you presently have about possible career options?

1 (0.3)	2 (1.2)	3 (3.5)	4 (26.3)	5 (35.2)	6 (28.0)	7 (5.6)
None of the Information I Need			Some of the Information I Need			All the Information I Need

(Note: Figures in parentheses are the percent of responses.)

CIRCLE THE GRADE THAT YOU WOULD GIVE SIGI ON EACH OF THE FOLLOWING:

9. How interesting was SIGI to you? (62.7; 31.6; 4.5; 1.1; 0.1) A, B, C, D, or F
10. How clear was SIGI in giving information? (68.8; 27.0; 4.0; 0.1; 0.1) A, B, C, D, or F
11. Overall, how good is SIGI? (57.0; 37.4; 4.8; 0.8; 0.0) A, B, C, D, or F

CIRCLE THE GRADE THAT SHOWS HOW USEFUL SIGI WAS IN EACH OF THE FOLLOWING:

12. Helping you decide which occupation to prepare for. (19.2; 52.7; 24.1; 2.7; 1.3) A, B, C, D, or F
13. Helping you become more aware of your values. (64.6; 28.6; 5.5; 1.2; 0.1) A, B, C, D, or F
14. Showing you the relationship between values and career decisions. (65.3; 30.6; 3.3; 0.7; 0.1) A, B, C, D, or F
15. Helping you find out which occupations might fit your values. (58.1; 33.1; 7.2; 1.2; 0.4) A, B, C, D, or F
16. Helping you get information about occupations. (46.9; 36.5; 14.6; 1.6; 0.4) A, B, C, D, or F
17. Helping you learn how to make career decisions. (34.4; 48.3; 15.8; 1.1; 0.4) A, B, C, D, or F

18. What role has SIGI played in your occupational choice?

(A) (64.7) SIGI broadened my knowledge of possible careers.

(B) (26.7) SIGI helped confirm the choice I had already made.

(C) (5.1) SIGI helped me to choose an occupation.

(D) (3.5) SIGI provided little or no help.

19. In using SIGI, did the occupations of interest to you show up on the list determined by your values? (A) (78.9) Yes (B) (21.1) No

20. Were there any occupations missing from SIGI that you were interested in?

(A) (36.2) Yes (B) (63.8) No

If yes, name them: _____

_____

21. What did you like best about SIGI (Check one only)?

(A) (33.8) Learning about my values.

(B) (32.7) Finding occupations that fit my values.

(C) (22.3) Getting occupational information.

(D) (3.1) Learning a strategy for making decisions.

(E) (0.6) Learning how values affect decisions.

(F) _____ Other, please explain: _____

_____

22. Is there anything SIGI didn't cover that you would like it to cover?

(A) (22.8) Yes (B) (77.2) No

If yes, please explain:

_____

_____

_____

_____

_____

_____

_____

_____

23. Did SIGI meet your expectations?

(A) (93.7) Yes (B) (6.3) No

24. Now that you have finished SIGI, what are you going to do next?

(A) (10.2) Talk with a faculty member.

(B) (24.7) Research in the Career Resources Library.

(C) (27.7) Talk with a member of the Career Planning and Placement staff.

(D) (25.6) Talk with a staff member in the Counseling Center.

(E) (18.0) Interview someone in a career in which you are interested.

(F) (10.8) Talk with your faculty advisor.

(G) (1.7) Am not planning to do any further research.

(H) (39.9) Think about it for a while.

(I) (7.1) Other